

Obesity Brief

What is Obesity?

Body weight is influenced by a combination of genes, metabolism, behaviors, environment, culture, and socioeconomic status. Overweight and obesity describe body weight conditions which result from an energy imbalance, which involves consuming excess calories and lack of adequate physical activity. Body mass index (BMI) reflects an adult's weight in relation to his or her height and is often used as a measure of excess body weight. An adult with a BMI between 25 and 29.9 is considered overweight.¹

Obesity is a condition of overweight in which an individual has a body weight greater than what is considered healthy for his or her height. An adult with a BMI of 30 or higher is considered obese. Among teenagers, an individual with a weight that is greater than or equal to the 95th percentile for all teens of the same age and gender is considered to be obese. Obesity contributes to the risk for certain diseases and health problems.¹

Risk Factors for Obesity

Demographic Risk Factors

- *Age*
- *Gender*
- *Race/Ethnicity*
 - Blacks and Hispanics have the highest prevalence of obesity in the United States.²
- *Genetics or Family History*
 - The risk of obesity is two to three times higher for a person with a family history of obesity than for a person without such a history.³
 - One to five percent of obesity cases can be explained by certain genetic conditions and diseases such as Bardet-Biedl syndrome and Prader-Willi syndrome.³

Social and Behavioral Risk Factors

- *Poor Nutrition or Dietary Habits*
 - Obese children have a 70% chance of becoming obese adults.⁴
 - Media may contribute to poor nutritional choices and increased snacking among children.⁴
- *Sedentary Lifestyle*
 - Studies have shown that television and computer time are associated with an increased likelihood of obesity in children.⁴
 - Forty percent of adult Americans do not engage in any leisure time physical activities.⁵
- *Poverty or Low Income*
 - In 2008, the median prevalence of obesity among Americans decreased with increasing income.⁶
 - Communities that are not safe, or that lack access to affordable fresh food can act as barriers to a healthy diet, and discourage physical activity.⁴

- *Dysfunctional Home Life*
- *Lower Education*
 - Parents who understand proper nutrition can help young (preschool) children in choosing healthy foods.⁷
 - Educating school-aged children about nutrition helps create healthful eating habits early in life.⁷
 - Improved nutrition, avoidance of excess consumption and regular physical activity are all keys to maintaining adequate nutrition and a healthy weight. Establishing a healthy lifestyle through healthful nutrition and physical activity should be learned and begin in childhood.
 - Research has shown that the impact of nutrition education may be most effective when targeted at school-aged children.⁷

Intermediate Conditions

Obesity also increases the risk of other diseases and is accompanied by many complications. Some of these include:

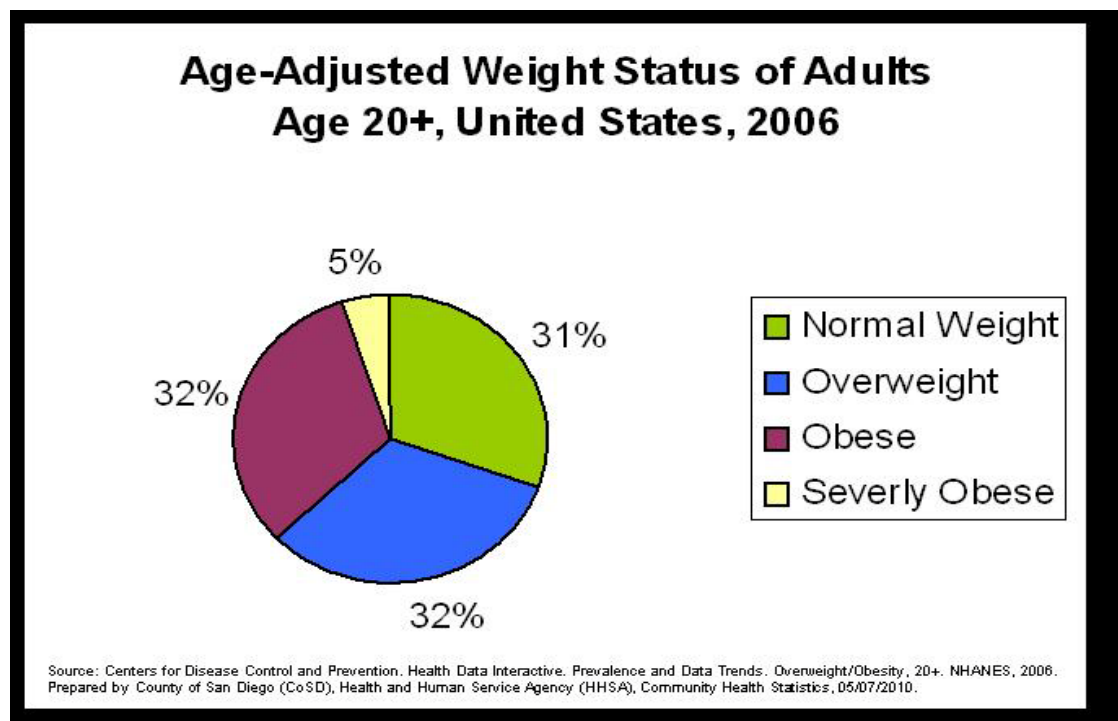
- *Heart Disease*⁸
 - The incidence of heart disease is increased in overweight or obese individuals.
 - The rate of high blood pressure among obese people is double that of people with a healthy weight.
 - Obesity is associated with elevated triglycerides (blood fat) and decreased HDL cholesterol ("good cholesterol").
- *Diabetes (Type 2)*⁸
 - People who have gained 11 to 18 pounds have twice the risk of developing Type 2 diabetes when compared to individuals who have not gained weight.
 - More than 80% of people with diabetes are overweight or obese.
- *Cancer*⁸
 - Risk of some cancers is increased among people who are overweight and obese, including endometrial (cancer of the lining of the uterus), colon, gall bladder, prostate, kidney, and breast cancer (in postmenopausal women).
- *Reproductive Complications*⁸
 - A mother who is obese during pregnancy has an increased risk of death for both her and her baby.
 - Obese women who are pregnant are more likely to have gestational diabetes and to have problems with labor and delivery.
 - Infants born to obese women are more likely to be high birthweight, and are more likely to be delivered via Cesarean section and to suffer adverse consequences during delivery.
 - An increased risk of birth defects, particularly neural tube defects such as spina bifida, is associated with pregnancy among obese women.
 - Women who are obese may suffer from irregular menstrual cycles and infertility.
- *Additional Consequences*⁸
 - Sleep apnea (interrupted breathing while sleeping) and asthma are more common in obese individuals.

- For every 2-pound increase in (over)weight, the risk of developing arthritis is increased by 9 to 13%.
- Excess body weight is associated with increased gall bladder disease, incontinence, increased surgical risk, and depression.
- Obesity can affect the quality of life through limited mobility and decreased physical endurance, as well as through social, academic, and job discrimination.

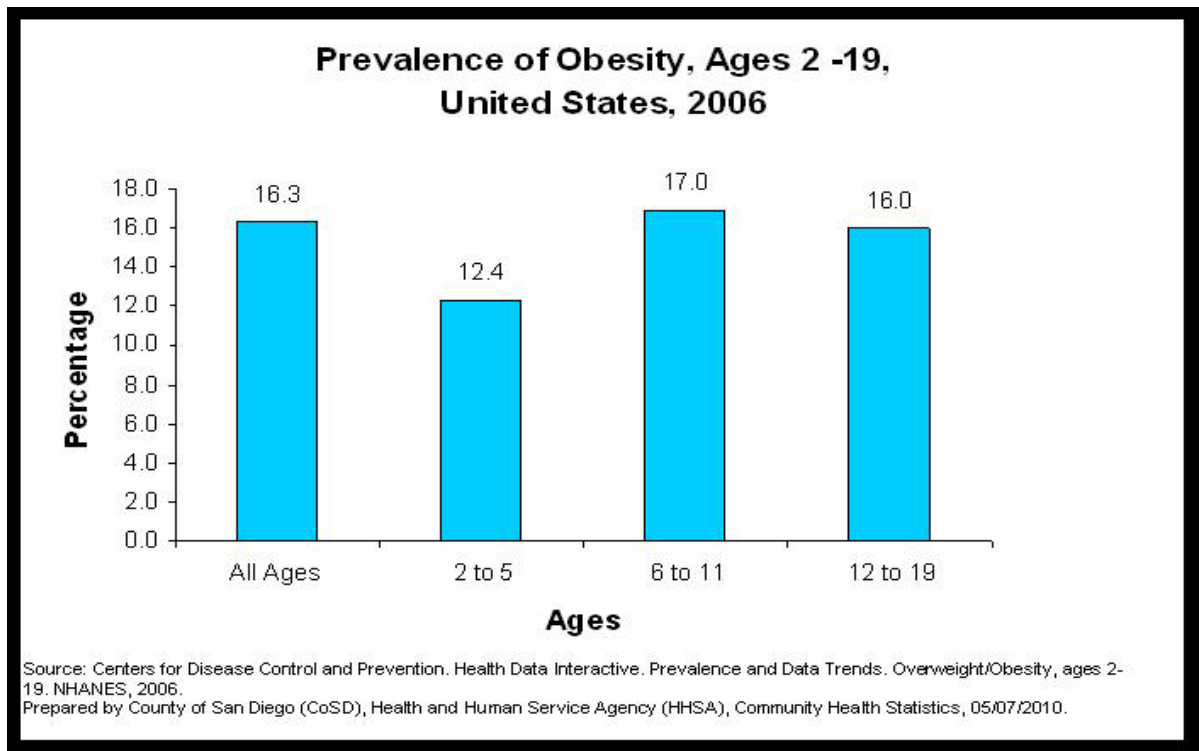
National Statistics and Disparities

Statistics

- *Premature death related to obesity*⁸
 - The risk of premature death rises with increasing weight, particularly among adults aged 30 to 64 years.
 - Obese individuals have a 50 to 100% increased risk of premature death from all causes, compared to individuals with a healthy weight.
 - The Surgeon General's Report estimated that 300,000 deaths per year may be attributable to obesity.

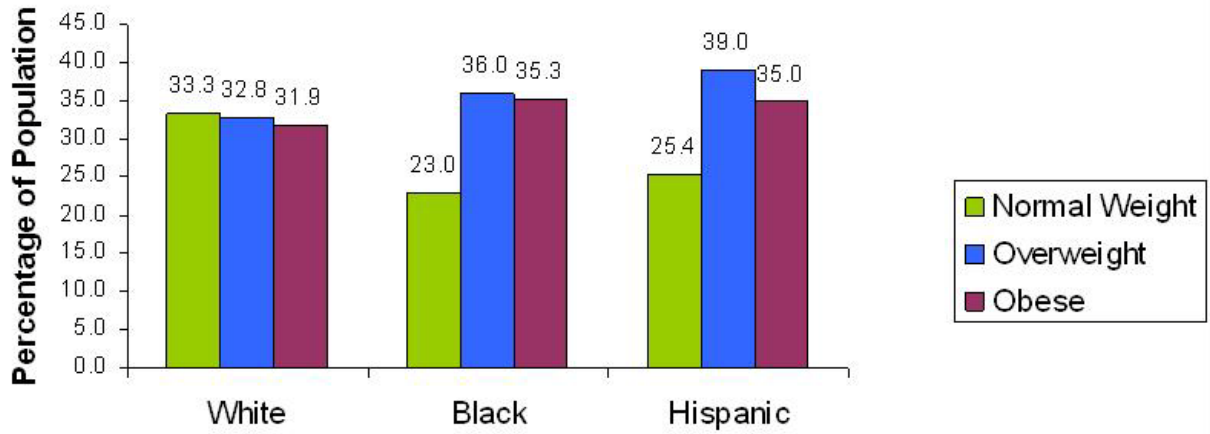


- In 2006, nearly 1 in 3 American adults (aged 20+) were considered obese.



- In 2006, nearly 1 in 6 children (aged 2-19 years) were considered obese.

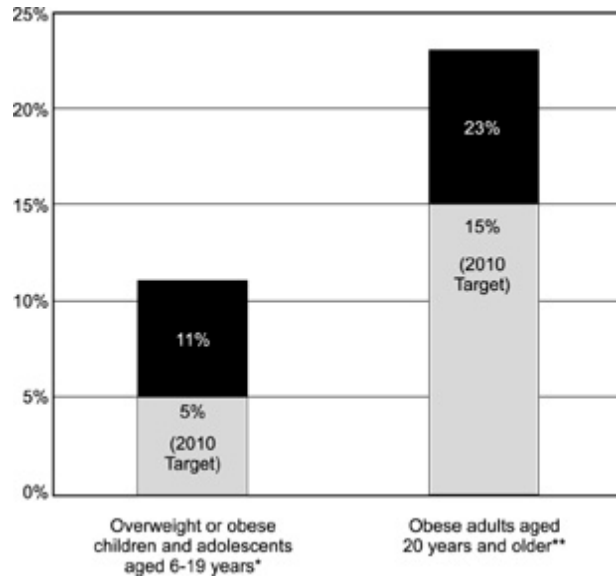
Weight Status Among Ages 20+ by Race/Ethnicity, United States, 2006



Source: Source: Centers for Disease Control and Prevention. Health Interactive Data. Overweight/Obesity, ages 20+. NHANES, 2006.
Prepared by County of San Diego (CoSD), Health and Human Service Agency (HHS), Community Health Statistics, 05/07/2010.

- In 2006, Blacks had the highest percentage of adults (aged 20+) who were obese, while Hispanics had the highest percentage of adults (aged 20+) who were overweight.

Overweight and obesity, United States, 1988–94



* In those aged 6 to 19 years, overweight or obesity is defined as at or above the sex- and age-specific 95th percentile of Body Mass Index (BMI) based on CDC Growth Charts: United States.

** In adults, obesity is defined as a BMI of 30 kg/m² or more; overweight is a BMI of 25 kg/m² or more.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health and Nutrition Examination Survey. 1988–94.

- In 2008, 33.2% of the population in the United States was considered obese.⁶
- In 2008, 24.3% of Californians were considered obese.⁶
- Many people live sedentary lives; 40% of adults in the United States do not participate in any leisure-time physical activity.⁵
- Less than 1/3 of adults engage in the recommended amounts of physical activity (at least 30 minutes most days).⁹

Disparities

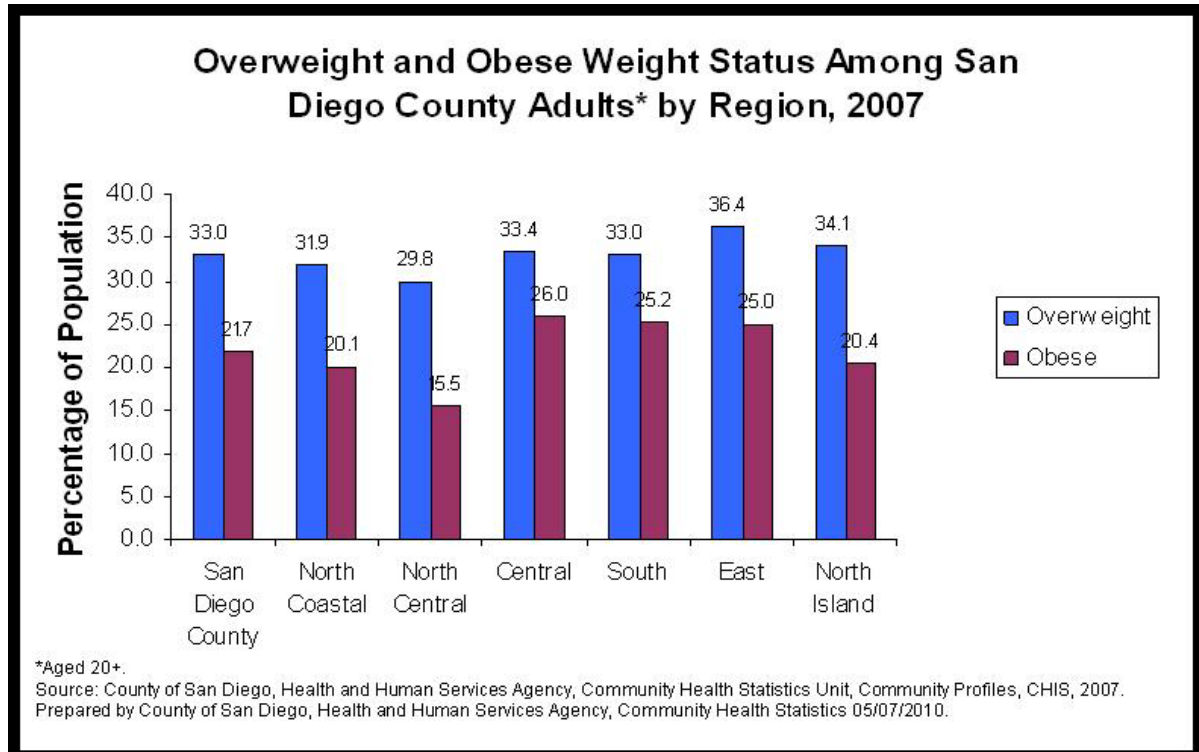
- In 2008, the median prevalence of overweight was higher among men than women. Among men, 43% were considered to be overweight compared to 30% of women. The median percentage of obesity was similar among men (27%) and women (26%).⁶
- Obesity is more common among Hispanic, African American, Native American, and Pacific Islanders than among whites; the greatest disparities within these groups are among women and girls.⁷
- In 2006-2008, the prevalence of obesity among blacks was 51% higher than whites, and the prevalence among Hispanics was 21% higher than whites.²
- Adolescents from lower income households are twice as likely to be overweight or obese as adolescents from higher income households.⁷

Cost

- In 2000, the annual cost of obesity in the United States was about \$117 billion.⁶

Local Statistics and Disparities

- In San Diego County, according to the 2005 California Health Interview Survey, 18.5% of adults aged 20 years and older were obese (BMI 30.0 or higher) based on their height and weight.¹⁰
- In San Diego County, according to the 2005 California Health Interview Survey, 15.3% of youth aged 12 through 19 years, were obese or overweight based on their age and weight (not controlled for height).¹⁰



- In 2007, the East region of San Diego County had the highest prevalence of overweight adults, while the Central region had the highest prevalence of obese adults.

Obesity and Its Complications: Prevention for Individuals

- *Control Portion Sizes, Eat Regularly*
 - Reducing your calorie intake by 150 calories a day, along with participating in moderate activity, could double your weight loss and is equivalent to approximately 10 pounds in 6 months and 20 pounds in 1 year.⁵
- *Eat Nutrient-Dense Food Versus Calorie-Dense Food*
 - Eat at least five servings of fruits and vegetables a day
 - Follow the Dietary Guidelines for Americans (www.health.gov/dietaryguidelines).
- *Incorporate Physical Activity Into Everyday Routines*⁵
 - Individuals should aim to engage in moderate physical activity on most days of the week.
 - Reduce time spent doing sedentary activities such as watching television and using the computer.
 - Limit TV time to less than 2 hours per day.
- *Make Fitness a Priority and a Commitment.*⁵

Prevention Tools for Public Health Professionals: Obesity Critical Pathway

There are many opportunities for public health professionals in the community to help reduce the risk of obesity and to improve the health outcomes of individuals who already have the disease. To assist in community health efforts, an *Obesity Critical Pathway* was developed.

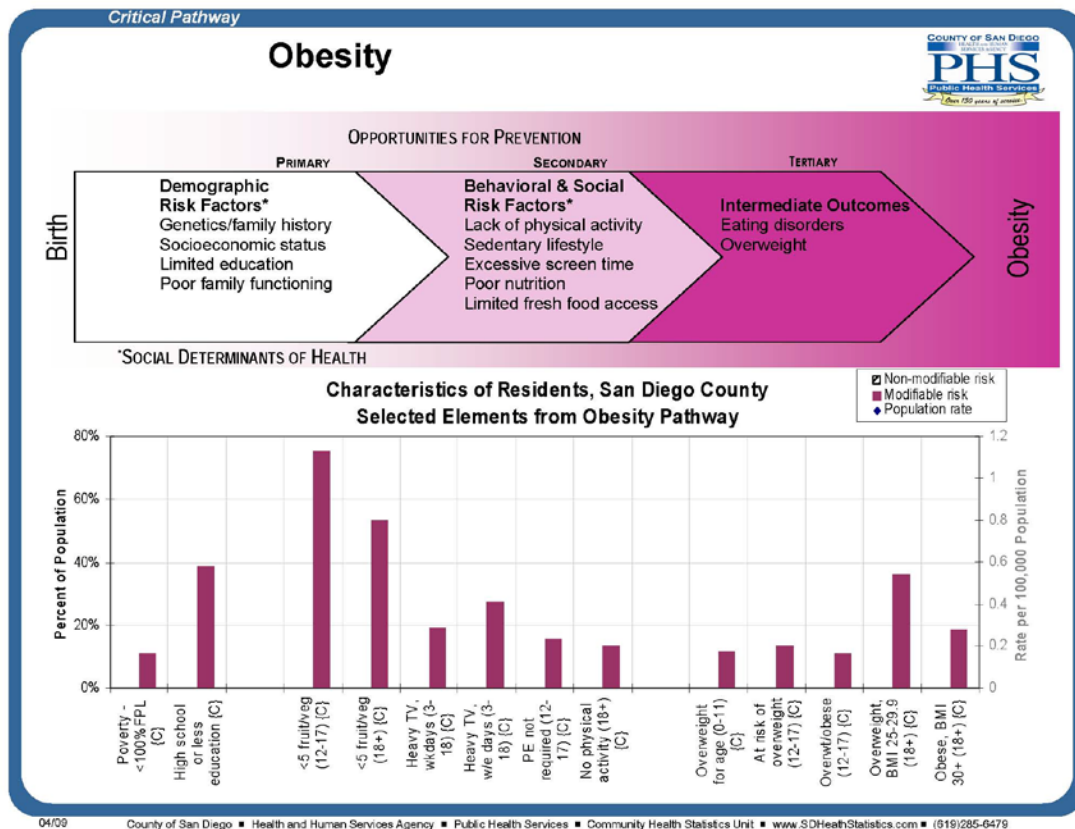
The *Obesity Critical Pathway* is a tool to be used in health promotion and disease prevention efforts. Its purpose is to identify populations at greater risk for obesity, and to identify prevention and early intervention opportunities. The *Obesity Critical Pathway* displays a diagram of the major risk factors and intermediate outcomes or related diseases that have an impact on, or result from, obesity. Risk factors are marked as non-modifiable (black striped bars) such as race/ethnicity or gender and modifiable (solid colored bars) such as physical activity or high blood pressure.

Beneath the risk factors diagram is a data grid describing the San Diego resident population in relation to selected elements of the pathway. The data grid is designed to assist in quick identification of opportunities for interventions that might have a high impact on a particular disease. The data represent all San Diegans, not only those with a particular disease. The left axis (bar) indicates the percent of the population with a known risk factor or intermediate outcome. The right axis (diamond) indicates the rate of a particular medical encounter within the population that is specified. The data are described fully described fully in the complete version of the *Critical Pathways*.¹¹

In addition, the Community Health Statistics Unit website (www.SDHealthStatistics.com) provides detailed demographic, health and facility data including maps of geographically formatted health data. Also available are links to other County data sources, state and national

sites of interest. For further assistance with data or interpretation, please contact the Community Health Statistics Unit.

Obesity Critical Pathway to Disease.



Data Sources

¹ Centers for Disease Control and Prevention. Defining Obesity and Overweight. <http://www.cdc.gov/obesity/defining.html>. Last updated December 8, 2009. Accessed May 7, 2010.

² Centers for Disease Control and Prevention. Overweight and Obesity. U.S. Obesity Trends. <http://www.cdc.gov/obesity/data/trends.html>. Last updated November 20, 2009. Accessed May 7, 2010.

³ Newell A, Zlot A, Silvey K, Ariail K. (2007). Addressing the obesity epidemic: a genomics perspective. *Prev Chronic Dis* 4 April 2007. http://www.cdc.gov/pcd/issues/2007/apr/06_0068.htm.

⁴ Centers for Disease Control and Prevention. Childhood Overweight and Obesity. <http://www.cdc.gov/obesity/childhood/index.html>. Last updated March 31, 2010. Accessed May 7, 2010.

⁵ U.S. Department of Health & Human Services. Office of the Surgeon General. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Overweight and Obesity What Can You Do?* http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_whatcanyoudo.htm. Last updated January 11, 2007. Accessed May 7, 2010.

⁶ Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention & Health Promotion. Behavioral Risk Factor Surveillance System. Prevalence and Trends Data. Overweight and Obesity, 2008. <http://apps.nccd.cdc.gov/BRFSS/>. Accessed August May 7, 2010.

⁷ U.S. Department of Health and Human Services. "Nutrition and Overweight" in *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. (Washington, DC: U.S. Government Printing Office. November 2000). <http://www.healthypeople.gov/Document/HTML/Volume2/19Nutrition.htm>. Accessed April 14, 2009.

⁸ U.S. Department of Health & Human Services. Office of the Surgeon General. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Health Consequences.* http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_consequences.htm. Last updated January 11, 2007. Accessed May 7, 2010.

⁹U.S. Department of Health & Human Services. Office of the Surgeon General. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Overweight and Obesity At a Glance.

http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_glance.htm. Last updated January 11, 2007. Accessed May 7, 2010.

¹⁰ County of San Diego, Health and Human Services, Public Health Services, Community Health Statistics Unit. (2009). *Healthy People 2010 Health Indicators for San Diego County*; Full Report. www.SDHealthStatistics.com. Accessed May 7, 2010.

¹¹ County of San Diego Health and Human Services Agency, Public Health Services. Community Health Statistics Unit. (2009). *Critical Pathways: the Disease Continuum*. April, 2009. <http://www.sdcountry.ca.gov/hhsa/programs/phs/documents/CHS-CriticalPathwaysofDisease7-3-09.pdf>. Accessed July 16, 2009.